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AUTHOR Scott, David
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ABSTRACT

The very nature of the art object has resulted in slow progress toward electronic data processing in art museums. Art objects are described on several levels. The empirical, concerned with the piece as an object, and the main concern of the registrar, is most suitable for computer adaptation. This idea, however, is not an attractive one because the present manual system is seen as sufficient for collection manageability. The analytic and valuative levels are concerned with the object's meaning and significance. These are the curator's territory, and, since they are almost totally unsuitable for any computer adaptation, the curator finds computerization totally unsatisfactory for research and collection management. Some collections have tried computerizing records, but only when collection manageability, cost and effort-effectiveness have been facilitated to a greater extent by computerized systems will they be accepted. To date progress has been slow, but eventually collection size will force the issue of computerization. Only then will art museum networking, which is desirable in theory and follows computerization, become a reality. (Author/MER)

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MUSEUM DATA BANK RESEARCH REPORT

Number 7

The Yogi and the Registrar

by
David Scott

March 1976

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Museum Data Bank Committee
Robert G. Chenhall, Chairman

Margaret Woodbury Strong Museum
700 Allen Creek Road
Rochester, N.Y.

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In the company of the research reports of this series, the following paper can claim only the status of an essay. It will attempt to survey, from the vantage point of the art museum administrator, the common ground between the Registrar and the Curator, and to determine whether the common ground, if any, justifies cultivation in the form of data processing. This investigation aims at no revolutionary conclusions, but it may help in clarifying the nature of some of the problems which characterize art museums and set them apart in the museum community.

Most of these problems are traceable to the nature of the work of art itself.* Insofar as its fundamental value and significance are commonly accepted as being intuitively apprehended, unquantifiable by any objective scale, and unique to the object, the work of art is the source of both pride and despair to the profession. The demonstration and assessment of value come, ultimately, only from the response of the viewer, and all "data" that document this response are subjective in origin.

At the same time, a very rare and highly acclaimed work of art may be worth millions of dollars on the market, so the primary or aesthetic value may be overshadowed by the sensational commercial value. There are, of course, a number of possible kinds of secondary value, which may in turn be more or less objectively quantifiable: not only market price, but documentary value (historical, biographical, iconographic, social, scientific), value because of associations (religious, patriotic, sentimental), or functions (decorative, didactic), and so on.

The Director of an art museum, therefore, finds himself a foster father to a horde of objects whose value descriptors, individually and collectively, run the widest gamut, subjective to objective, and are often completely unlike in kind. At one pole, his job is to take an inventory and establish the identity, condition, ownership and location of each object. At the other, he must assess the grounds for each object's being evaluated as art or good art or great art. On the one hand, he appoints as an assistant a Registrar with a passion for order. On the other, he appoints a Curator, hopefully knowledgeable, with a sixth sense for artistic quality.

The result, to paraphrase Arthur Koestler (1945: 3), is to bring together into the art museum the Yogi and the Registrar. The Registrar, like Koestler's Commissar, believes that

> all the pests of humanity...can and will be cured by Revolution, that is, by a radical reorganization of the system...; that logical reasoning is an unfailing compass and the Universe a kind of very large clockwork [read <u>computer</u>].

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* In this paper, "work of art" will in general refer to a painting or work of sculpture; prints and the decorative arts will be considered incidentally and as secondary categories.

As for the Curator, if we may suppose an extreme manifestation and again borrow from Koestler (1945: 4):

> At the other end of the spectrum...where the waves become so short and of such high frequency that the eye no longer sees them,...crouches the Yogi...He believes that logical reasoning gradually loses its compass value as the mind approaches the magnetic pole of Truth or the Absolute, which alone matters. He believes that nothing can be improved by exterior organization and everything by individual effort from within...He believes that each individual is alone but attached to the all-one through an invisible umbilical cord...

Now, Koestler concluded that these polarities have never been combined in one individual. To be sure, the art museum Director may have to attempt to reconcile these opposed temperaments, but that is not where the inevitable disparity lies. In art museums we find, on occasion, intuitive registrars and orderly curators. But in carrying out their functions they discover that they have divergent needs because of divergent and incompatible value systems which pertain to the objects of their concern.

To illustrate this, and to bring the point home, let us take a specific example from the publications of the Museum Data Bank Committee itself. In Museum Data Bank Research Report Number 3, Jack Heller (1974) has supplied a somewhat abbreviated sample of a card catalogue entry, with a hierarchical structure, as a documentation of Picasso's well-known painting, Three Musicians, in the collection of The Museum of Modern Art in New York (see Figure 1). His "record" contains "fields of information composed of tag, value and connectivity data." Heller's intention in producing this sample record was to demonstrate the application of connectivity data, but the record can also be used in our present study as a starting point in examining the relative objectivity of the contents of the fields themselves.

In Heller's record, the fields consist of the basic documentation characteristic of registrars' records, essentially "objective" (the first group of fields), and then five or six subject-matter descriptions of a kind that would normally be more of interest to a curator or art historian than to a registrar.

Even the first group of fields, the basic documentation, proves upon examination to contain data subject to variation as they appear in other contexts--data which are established in "authoritative" form only by arbitrary decisions. Early catalogues of The Museum of Modern Art give the title as Three Musicians (Three Masks) and the measurements as 80-3/4" x 88-1/2". Later catalogues give the title as simply Three Musicians and the measurements 6'7" x 7'3-3/4" (Barr 1939: 108; Barr 1946: 122; Rubin 1972: 112). But it is at this level that data discrepancies are most easily resolved and agreement as to "facts" most easily reached.

RECORD 5

TYPE	oil painting	
ACCNO	21.37p	
TITLE	The Three Musicians	
ARTIST	Picasso, Pablo	*T->(16,)
VENDOR	Gallerie Rosenberg	
MADE	1921	
LOC	The Museum of Modern Art, New York	*T->(13,)
SIZE	79 x 87 3/4"	
REF	Our-2	*T->(12,)
REF	70-164877	*T->(11,)
MEDIUM	oil	
MEDIUM	canvas	

(5,1)	U- (5,)
FIGURE	musician
POSITION	front

(5,1,1)	U- (5,1)
OBJECT	clarinet
COMMENT	left figure

(5,1,2)	U- (5,1)
OBJECT	guitar
COMMENT	center figure

(5,1,3)	U- (5,1)
OBJECT	accordian
OBJECT	music store
COMMENT	right figure

(5,2)	U- (5,)
FIGURE	dog
POSITION	side

Figure 1
A hierarchical computerized catalog record
(from Heller 1974: 14)

Turning to the second group of data entries and comparing various published accounts of the painting, we find more disparity and less objectivity than in the case of the first group. What, indeed, is the subject matter of the picutre? All shapes are highly distorted and abstracted, but there appear to be three seated figures, in costumes and masks. Two hold musical instruments and the third, a musical score. There also appears to be a table in the foreground, with objects on it, and a dog in the background. Because of their musical accessories, the figures can be termed "musicians," but they can as well be labeled "actors" or "masks," or "a pierrot, a harlequin and a monk," on the basis of their costumes. The musical instrument of the left-hand figure is perhaps more like a recorder than a clarinet. The musician to the right holds a musical score, not an accordion, and is perhaps shown as singing (see Rubin 1972: 112. In a second version of Three Musicians, owned by the Philadelphia Museum of Art, the monk holds an accordion).

In short, the instruments are not clearly established (clarinet or recorder?), the actions are not established (are the instruments being played or merely held?), and the figures cannot all be objectively labeled by costume ("musicians" or "actors"? and the "monk" may be a "domino"). Even greater confusion would attend the objects on the table had not an art historian questioned Picasso and learned that they represent a pipe, packet of tobacco, and pouch (Rubin 1972: 112). If it is objected that the painting chosen here for discussion is untypically obscure as to subject, the fact remains that the accurate identification of subject matter is a problem endemic in all art history.

The Three Musicians is a work of such importance in Picasso's oeuvre that many studies of art history refer to it, discussing the version in The Museum of Modern Art interchangeably with its companion piece in the Philadelphia Museum of Art. A quick look at some of these discussions reveals all the layers or levels of "fields" or value groupings that the critic-historian characteristically resorts to in describing and evaluating works of art. In connection with such discussions, the writer often begins by reproducing the painting together with a title line listing a half dozen descriptors at what might be called the "registrar's level":

> Pablo Picasso (1881-1973), Three Musicians, 1921, oil on canvas, 79" x 87-3/4", The Museum of Modern Art, New York (Mrs. Simon Guggenheim Fund)

Next, the critic-historian characteristically mentions the subject matter briefly (musicians, instruments, costumes and types, setting), and then goes on to comment about "style." Here we enter a third range of values, even more subjective and variable than "subject." We come across such characterizations as:

> A calculated rearrangement...of fragmented and geometricized images derived from a motif...(Read 1959: 156)

> Picasso's Three Musicians shows this "cut-paper style" so consistently that we cannot tell from the repro-

> duction whether it is painted or pasted...The separate parts are fitted together as firmly as architectural blocks, yet the artist's primary concern is...with the image of the three musicians... (Janson 1962: 523)
>
> The composition is classically severe...The forms are large, almost solemn. They are almost exclusively geometrical forms, and they are pieced together in the "synthetic" manner to suggest representational elements. (Haftmann 1965: 232)

These three characterizations overlap generously in content, but in saying much the same thing they employ almost totally different vocabularies. The only key words that are shared, even in root form, are "image, images" and "geometricized, geometrical." Although the critics might agree, more or less, on a few basic stylistic descriptors such as "cubism" and "synthetic cubism," they pursue their stylistic analyses using their own vocabularies and personal shades of meaning.

Finally, we come to the last layer of value-groups: to the actual evaluation of the work. For each critic-historian and in each context this may differ, yet it is for this "value" that the work is acquired, catalogued, preserved, displayed and studied by the art museum. The Three Musicians is cited as a masterpiece (Janson 1962: 523; Elgar and Maillard 1956: 126; Rubin 1972: 112), as a synthesis, summary or climax of Picasso's synthetic cubist period (Brandi 1966: 326; Barr 1939: 108; Barr 1946: 122; Rubin 1972: 112), as impressively monumental (Janson 1962: 523; Elgar and Maillard 1956: 126; Rubin 1972: 112), as disturbingly expressive (Janson 1962: 523; Haftmann 1965: 232), and as sad, solemn, sinister, superbly decorative and mysteriously majestic (Barr 1939: 108; Barr 1946: 122; Rubin 1972: 112; Haftmann 1965: 232). In short, it is regarded as significant because of its formal quality, its place in Picasso's oeuvre and in the history of art, and because of its expressive impact. But these evaluations are predominantly subjective, the result of a felt response or a comparative aesthetic judgment on the part of the critic-historian. Moreover, and most significantly, their import evades the computer.

It is not my point to labor the obvious fact that the descriptors used in regard to works of art are uncommonly slippery. However, as a spokesman for art museums in the company of botanists, biologists, anthropologists, archaeologists, social historians and computer scientists, I find it necessary to illustrate most explicitly the distinctive nature of the concerns of the critic-historian as they are shaped by the uniqueness and the unique nature of the object of art. Presently, we shall go on to consider the general implications of this in connection with data processing and networking, but first let us take another look at our observations thus far. It should come as no surprise that the conclusions we have reached through our case study should correspond closely enough to those reached by theoretical critics. We may illustrate this by a comparison with a schema derived by Kenneth C. Lindsay (1968: 24-25, 31-33, and 36) from a study by James S. Ackerman and already related to the computerization of art objects on the occasion of the

Metropolitan Museum's 1968 conference on Computers and their Potential Applications in Museums (see Figure 2).

The four value-groups of our analysis of Three Musicians correspond roughly to the "Levels" of the Lindsay-Ackerman chart. The registrar's or basic catalogue grouping parallels Level I, "Empirical; Work of art as object," although of course the basic records also include the documentation associated with the object. Subject matter falls under Level II, "Analytic: Formal and Symbolic Structure." (Ackerman's term "symbolic" is broader than "subject" and embraces abstract painting.) Stylistic analysis of a painting extends from II to IIa (Connoisseurship), and the fully subjective level is reached at III, "Intuitive or Valuative." In Lindsay's analysis, Level I yields data suitable for computer use; Level II does so partially; and Level III lacks such data.

It should by now be sufficiently clear that the critic-historian inevitably finds data more and more subjective and data-processing methods less and less helpful as he penetrates to meanings and significance. The greater part of his investigations may be conducted in the mid-level zones of styles and iconography, but even here the nature of the data limits the usefulness of the computer.

At this point I may be asked, "But who is this hyphenated critic-historian and what has he to do with day-to-day curating?" He may, of course, be an academic art historian exercising critical judgments and appearing as the author of standard texts and monographs, and at the same time he may very well show up on the staff of an art museum as a curator, writing such a book as Picasso in the Collections of The Museum of Modern Art. Indeed, the creative scholar-curator stands at the head of his profession.

It would be a gross over-simplication to assume that the creative scholar-curator spends the greater part of his time simply experiencing the unique qualities of art objects intuitively. Let us be quite specific in giving credit where it is due. The "empirical" tags are invaluable foundation stones for all art-historical research, understanding and criticism, and there have been occasions when the power of data processing has been extremely useful in solving problems of identification and attribution. Ways have also been devised to utilize it as a tool at the iconographic and stylistic levels.* But, after more than a decade of availability, the use of the computer for such art-related museum research remains fairly rare. The occasions when a mass of catalogue data can be analyzed for results significant to research are infrequent,** and so, it seems, are problems which are most effectively solved by specially constructed data bases.

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* See the reports of J. B. Bird, C. C. Daughterman and W. J. Paisley in Computers and their Potential Applications in Museums. Paisely suggests various uses for computers, but in general art research they have not yet proven effort-or cost-effective.

** See below for the special cataloguing efforts of the National Collection of Fine Arts and the National Portrait Gallery.

Levels	Objectification spectrum of our statement		Range of individualization	Information theory
I. Empirical Work of art as object; record of physical properties (size, shape, materials, condition), technique	I. by comparing against conventional standards of measurement	Operates with extrinsic characteristics of art	Least individualized	Less information because it has the most easily communicable message
II. Analytic Formal and symbolic structure (conventional character) IIa. (Connoisseurship) Style of individual artists	II. by comparing two or more works of art			
III. Intuitive or valuative Work of art as a unique object (total import)	III. by experiencing -- not tabulating -- the impact of the total art work	Process of articulating the uniqueness of individual works	Most individualized	More information because it has the more complex and individualized message

Figure 2
Levels of information analysis
(from Lindsay 1968: 24)

We come back to the fact that we are in a field where rarity and uniqueness are characteristic attributes, and where more or less subjective observations form a large part of the data on record.

To put this another way: in museum fields where the collections consist of many objects, each sharing certain extrinsic characteristics with numerous others, the mere cataloguing of objects creates a potential tool for computer-assisted research. Three factors are important: the size of the collection, the degree of overlap of the descriptors, and the nature of the descriptors. In the art museum, the rarity of the objects limits the extent of the data base; the individuality of the objects limits the overlap of the data; and the subjectivity of significant descriptors makes the accumulation of useful objective data difficult.

In the case of the National Gallery of Art, with about 2680 paintings and 1770 works of sculpture in its collections, the items within the purview of each curator can be reviewed or even inspected physically without difficulty. The Registrar's office does not find card records unmanageable.* In 1971 the Gallery, with the assistance of David Vance and Jack Heller of the Museum Computer Network, computerized the sculpture records as a test project. The principal benefit was probably the bringing of greater conformity to the record entries; also, the various printouts by artist, medium, title, subject, donor, etc. were and are convenient and useful.** However, there has been but little interest expressed in a follow-up, and the Gallery's sculpture curator remains convinced that the catalogue data base is of little help in research unless it is to be supplemented by an extensive descriptive record, using at least three hundred tags, breaking down materials, techniques, iconography and historical and stylistic factors in detail. The formation of such a data base for the 1770 items of sculpture is a staggering proposition, yet even were it to be completed it would be practically useless unless it were to be networked to similar banks in other museums.***

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* In constrasting the concerns of the Registrar and Curator, we should bear in mind that the Registrar's first question concerning an object is, more often than not, "where is it?" while the Curator relegates that question to the Registrar. In this connection, computerized records could be a great boon to the Registrar, but only if he has constant access to the computer, which at the present time raises serious questions of cost-effectiveness.

** The artist listings, it should be added, raised the question whether past attributions had not clustered too readily about well-known names.

*** The Sculpture Curator at the National Gallery, C. Douglas Lewis, points out that the entire picture would be changed if there were widespread national and international networking of computerized art museum catalogues. This is, of course, true, but the aim of the present paper is not to study the theoretical potential of computer-assisted art research, but rather to review the factors that account for its slow growth.

The curators of painting in the National Gallery also considered the sculpture computerization test project to be of only limited use. The Print Department, however, with some 30,000 to 40,000 items to keep track of and a rapidly expanding collection, recognized that the operation is at a point at which computerization could be of substantial help. Prints are, as objects, less individualized, more repetitive, more easily collected in quantity, more reflective of standardized and mechanical techniques, than paintings. Accordingly, computerized data are more useful in cataloguing procedures, and probably even elementary notations on technique and materials would make possible sorts which would assist research.

Few museums have painting collections large enough to make computerized collection management obviously attractive from the cost-effective or effort-effective standpoint. On the other hand, other types of collections can easily grow to such a size, especially if the objects collected lend themselves to characterization by repetitive and objective data. The National Portrait Gallery in Washington has only seven hundred works of paintings and sculpture, but its Catalogue of American Portraits contains 30,000 entries. The Gallery early resorted to data processing. It is by policy not concerned with aesthetic quality but with likeness, and it disclaims being an art museum. The National Collection of Fine Arts has sponsored an Inventory of American Painting. To date it has amassed about 130,000 entries. Computerized data processing obviously provides the proper tools for this undertaking which is, in fact, not concerned with cataloguing so much as creating an extensive and necessarily uncritical inventory.

The National Gallery of Art is faced with the problem of processing an even larger mass of art-related data, but in the form of collection control and cataloguing. The Photo Archive at the Gallery has been building up the photographic collection actively for about five years and now has over 600,000 photographs, with a goal of some two and a half million. Obviously, if only three sets of index cards were to be kept (artist, title and subject), the result would be 7.5 million cards, for practical purposes unmanageable and unsortable. The Gallery has been studying the computerization of its photographic collection data for several years, and it appears finally to be near the start of active processing.

The problem of identifying the essential descriptors for such a catalogue is difficult. The size of the collection is such that it is tempting to list all questions which might reasonably be asked so that the computer might be called on to help whenever one of them should arise. On the other hand, given a cataloguing task of this magnitude, every entry on the record card that can possibly be dispensed with must go.* If each record card took an average of only five minutes to fill out, a staff of five cataloguers working

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* One indispensible entry, however, is "subject," and identifying and listing subjects can lead to endless problems in iconography and terminology.

full time would require six years to process the photos already on hand, and at the end of that time the staff would be at least another six years behind in processing the acquisitions that had come in while they were working.*

The dimensions of the problem are such that it is easy to understand why the most nearly comparable photographic collection, at the Witte Library in London, keeps no cataloguing record at all of its holdings. It has a million photographs and a very limited staff. Photographs are filed alphabetically by artist in the boxes and on the shelves where they are stored. If a print is misfiled, there is not only no way of finding it but no direct way of determining whether it ever existed or how it could be replaced. The Witte Library is an invaluable resource but, for economic reasons, it has entered the realm of the Yogi, without benefit of Registrar.

While we are considering examples of cataloguing, we should also turn to the other extreme: The Museum of Modern Art in New York, where a zealous and inventive Registrar played a major role in developing a data processing system suitable for the records of art collections (but adaptable to other types of museum collections), and then supervised the entry of the museum's catalogue data into the computer. The example of The Museum of Modern Art demonstrates that an art museum with a collection of moderate size can process its catalogue records without great difficulty or expense if the Registrar takes the initiative, with the support of the administration, and that the resultant print-outs are useful.**

If other art museums appear currently to be slow to follow this lead, the reason traces back to the problem that lies behind the dichotomy between the Curator and Registrar, the problem that lies in the nature of the art objects themselves. To be sure, the Registrar may be more interested in a computerized catalogue than the Curator, but, more importantly, the art museum staff as a whole is less likely to be interested in such a catalogue than the staff of a history or science museum.***

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* The design of an appropriate catalogue entry form for a large photographic archive has been under study for some time at the National Gallery. Sample forms for both SELGEM and GRIPHOS use have been designed, but no actual entries begun. Meanwhile, the Mellon Center for British Art and British Studies at Yale has been awarded a four-year grant by the National Endowment for the Arts for the use of GRIPHOS in cataloguing their photographs.

** David Vance has documented his work at The Museum of Modern Art and for the Museum Computer Network, Inc. in a series of articles and publications; much of it is summed up in his Manual for Museum Computer Network Data Preparation (State University of New York at Stony Brook, 1975).

*** The interest of the art museum staff, of course, is also influenced by the state of its record-keeping: a new system is easier to adopt for a new undertaking than in the midst of an on-going cataloguing process. For example, the recently-opened Hirshhorn Museum and Sculpture Garden has adopted computerized cataloguing with no apparent difficulty (see Moore 1975).

In short and in sum, in the case of art galleries with a relatively select and limited collection of paintings and sculpture (if we may generalize from the experience of the National Gallery of Art and random observations):

1. The Registrar may be attracted to data processing but is not driven to it by collections management problems;

2. The Painting and Sculpture Curators do not regard the catalogue data base as a research or management tool requiring computerization; thus,

3. The staff and administration tend to avoid the disruptive cost and effort necessary to convert the basic records; however,

4. Curators on specific occasions may resort to computer-assisted data analysis as a research tool, using specially constructed data banks; meanwhile,

5. As certain collections grow, particularly print collections, the value of computer-assisted cataloguing becomes apparent to the curators concerned, as well as the Registrar; and

6. With very large research collections, like the Photographic Archive of the National Gallery, the museum staff will be forced to the use of the computer; this may well be the point at which the average curator first becomes familiar with the tool.

There is no doubt that the computer will be used increasingly in art museums, but since most of the registrars will not soon be in position to convert their core data into computer form, art museum networking, however desirable in theory, will be slow in coming about.

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